



Pricing Parameters in Motor Insurance in CEE – *some high level observations*

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FIAR May 2017

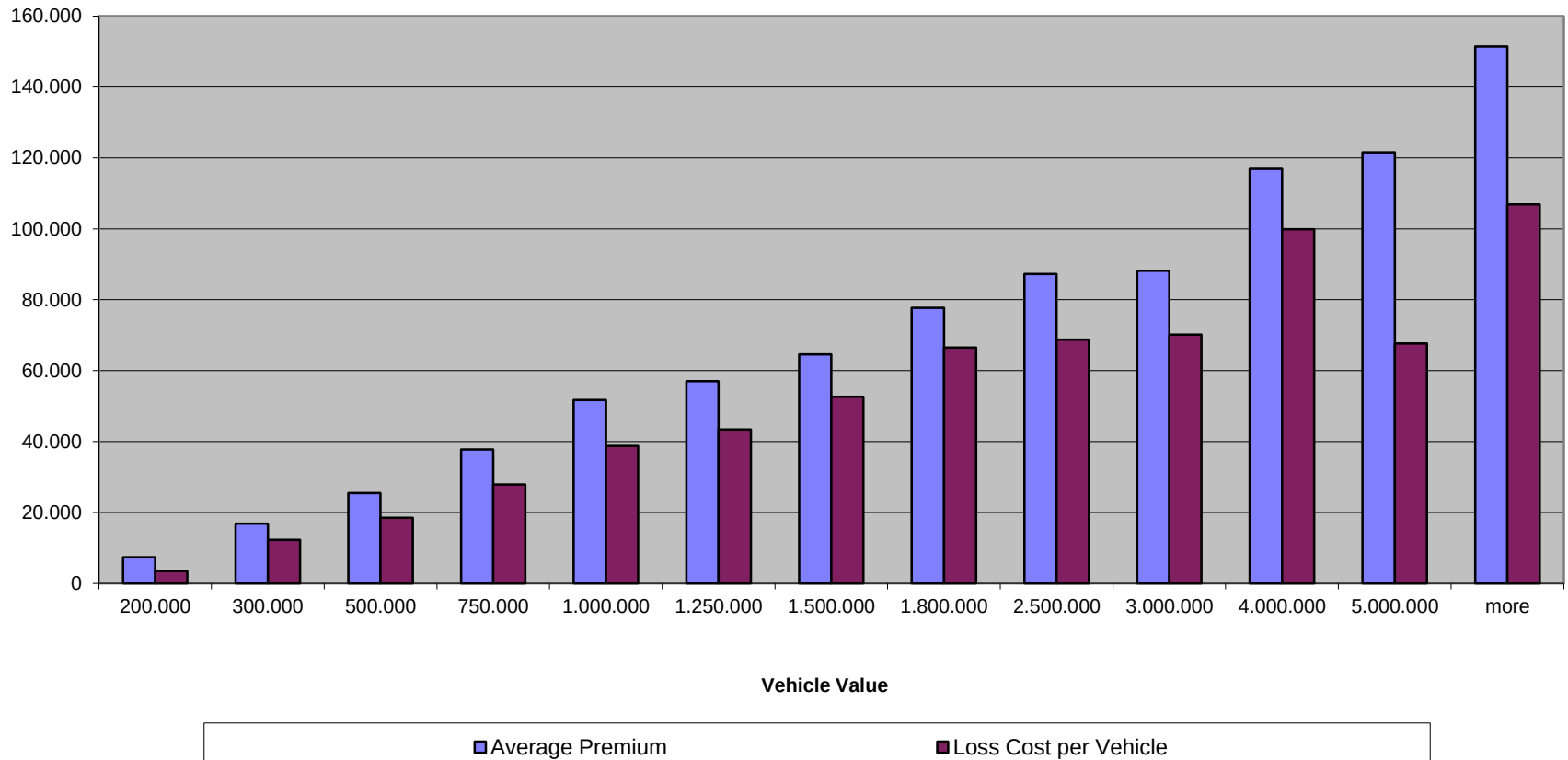


1. There is a wide variety of parameters used today – in many cases doubtful if validity statistically proven; for fleets: some „disconnect“ between needed and available information

Vehicle Value , Average Premium and Loss Costs correlate



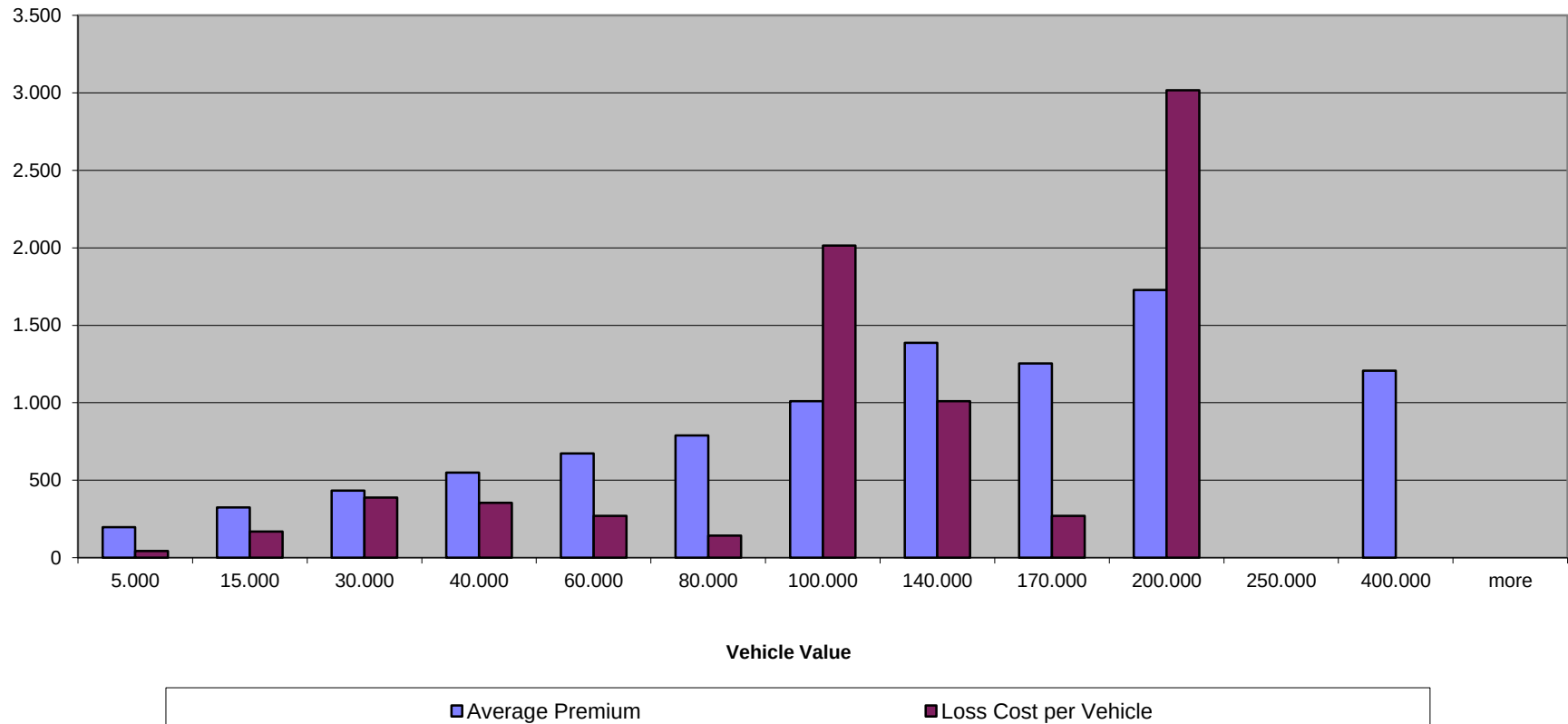
Average Premium vs. Loss Cost per Vehicle, UY 2012



Vehicle Value, Average Premium correlate but not Loss Costs



Average Premium vs. Loss Cost per Vehicle, UY 2013



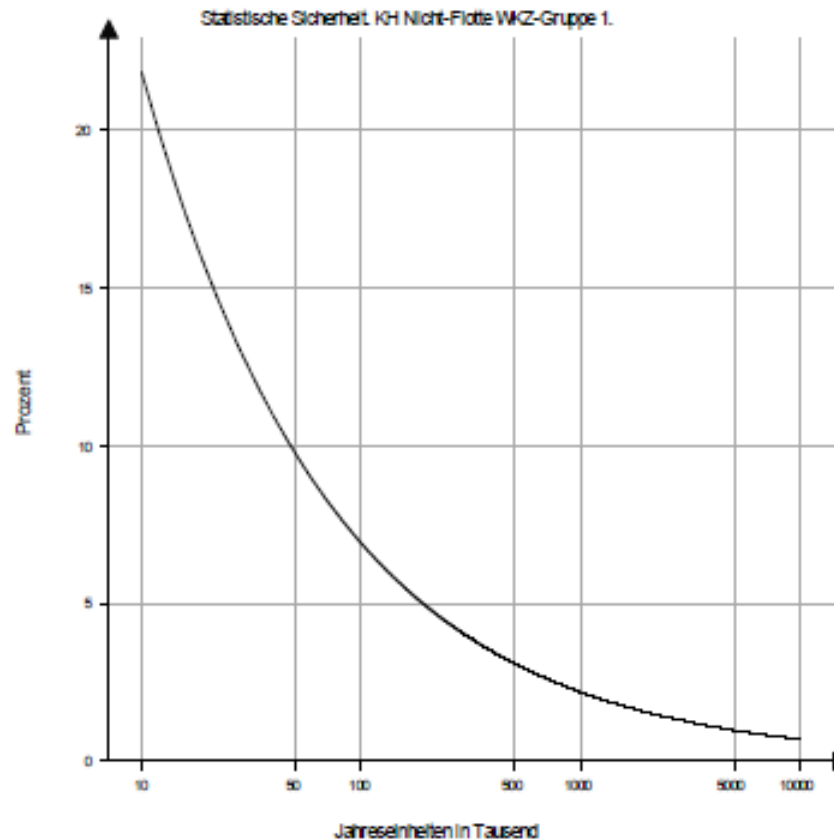
Example: Motor liability (MTPL), passenger cars

- Risk structure:
 - Type class (16 characteristic values)
 - Profession (3)
 - regional class (12)
 - Claim / No-claim class (bonus / malus) (39)
 - Mileage per year in 1.000 km (8)
 - Ownership of residential property (2)
 - Differentiated age of users (16)
 - Group of users (2)
 - Age of the motor vehicle when acquired (12)
- That means more than 138 million risk cells for passenger cars!
- Number of risks: 41.8 million.
- Number of claims: 2.7 million.

Very large number of data needed for statistical stability

Jahreseinheiten	Schadenbedarf $\hat{E}(SB)$	Standardabweichung $\hat{\sigma}$	Statistische Sicherheit von 95 %
10.000	161,1	1.861	22,64 %
100.000			7,16 %
1.000.000			2,26 %
41.408.658			0,35 %

Vehicle years
statistical confidence:
95%





1. There is a wide variety of parameters used today – in many cases doubtful if validity statistically proven;
2. Subjective (Behavioral) vs. Objective (Vehicle related) Parameters Significant changes of both

Automated Driving the vision (**nightmare**)



Juris Zvirbulis
President
Autoclub LAMB

2030

Majority of vehicles are now
Self-driving Electric Ubers



Last person on Earth takes a
driver's license exam



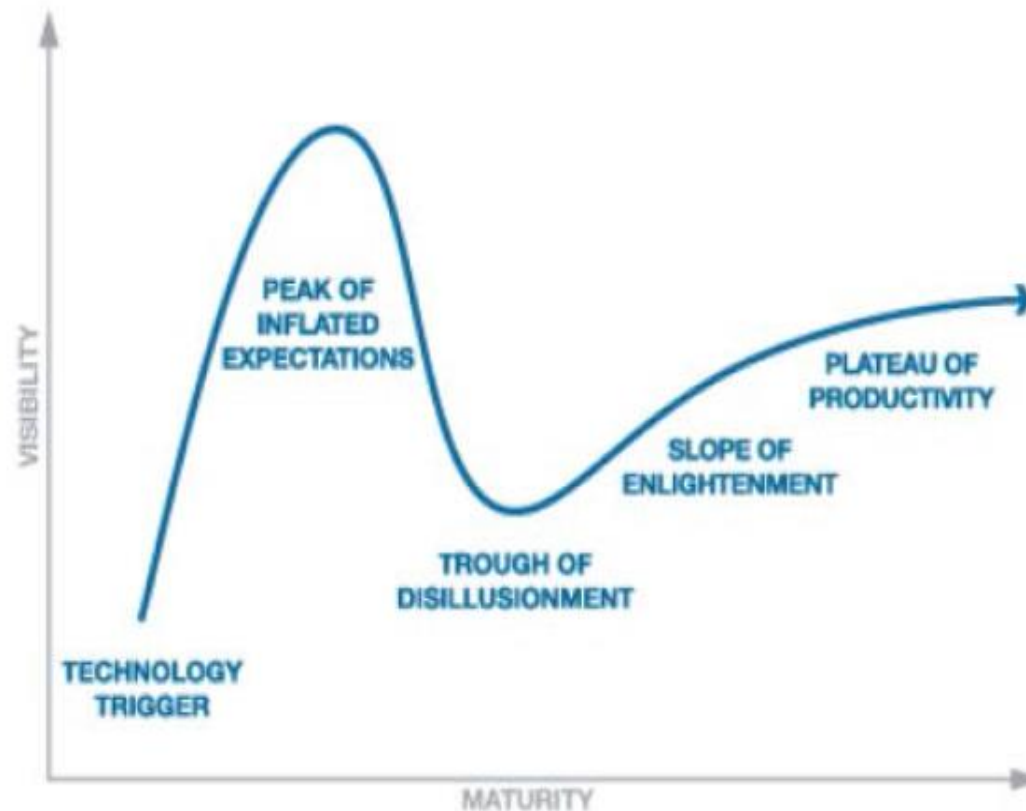
Manual driving to be outlawed
and restricted to closed roads

... where are we on automated driving?



The Gartner hype cycle of emerging technologies

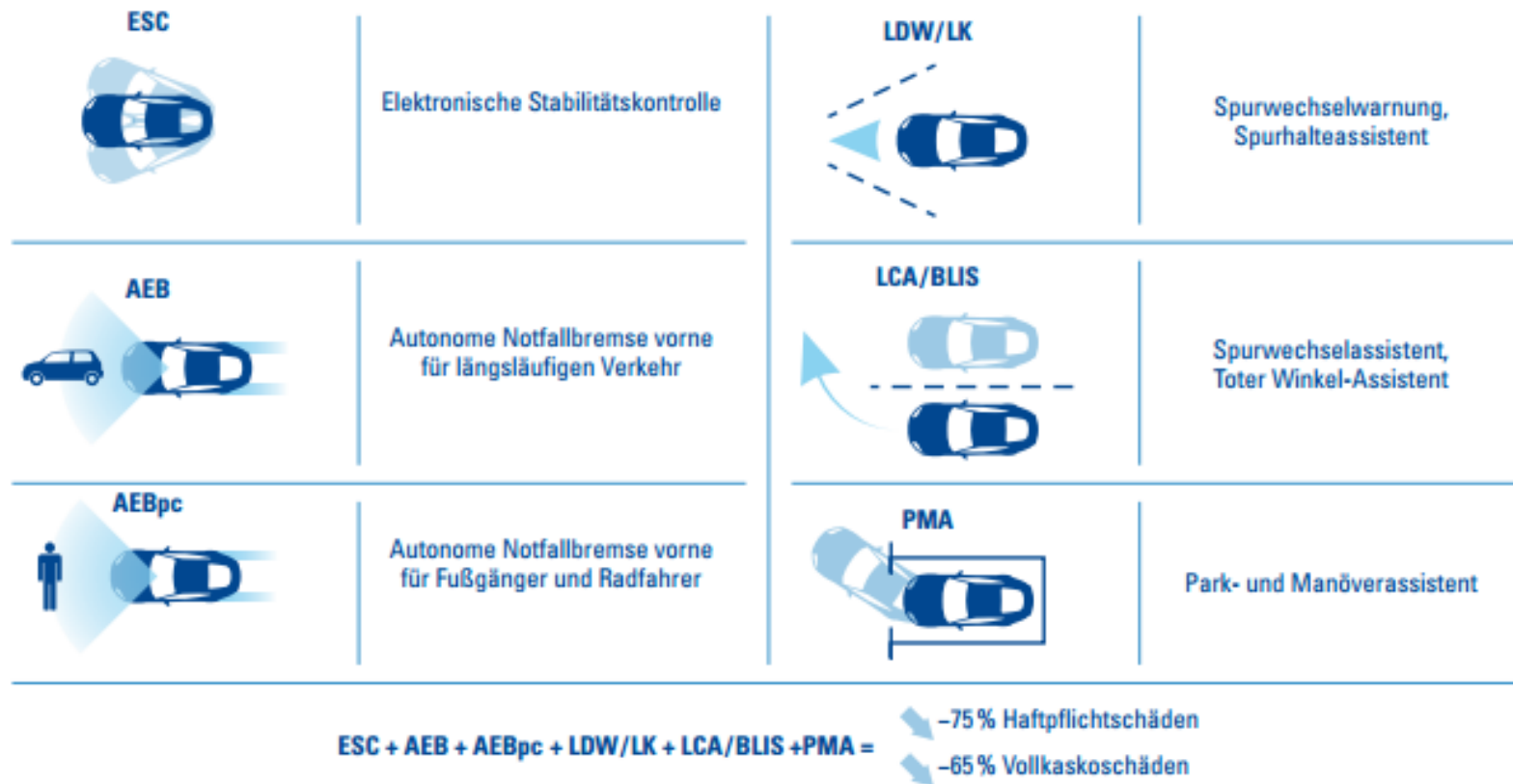
<http://www.gartner.com/technology/research/methodologies/hype-cycle.jsp>



Reduction of 75% in Loss Costs in MTPL; 65% in MOD due to 6 major driver assist systems



Abb. 5: Die sechs wichtigsten Fahrerassistenzsysteme



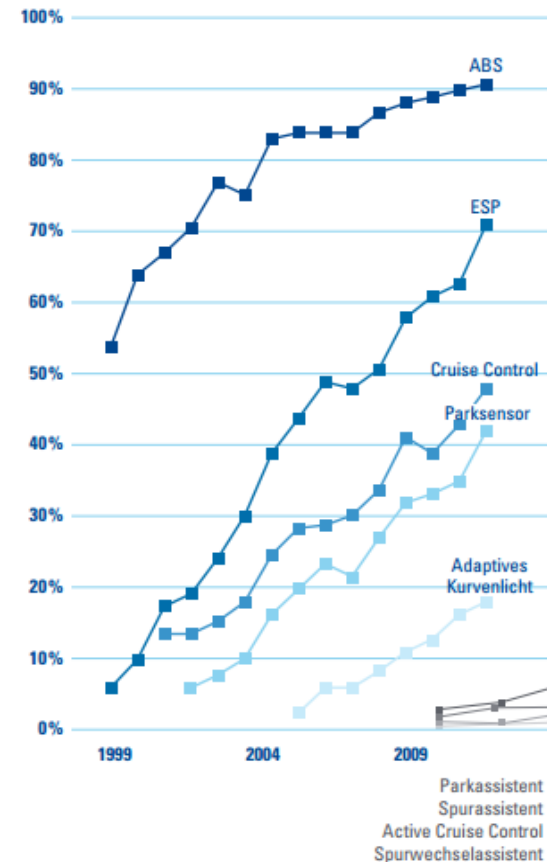
Quelle: Allianz Zentrum für Technik

Market Penetration for „classical“ driver assist systems



- Good news: Most CEE markets can learn from higher income countries before premiums drop.
- „Bad“ news: further drop of necessary premiums in the pipeline.

Abb. 9: Durchdringung des Fahrzeugbestands durch Fahrerassistenzsysteme im Zeitverlauf

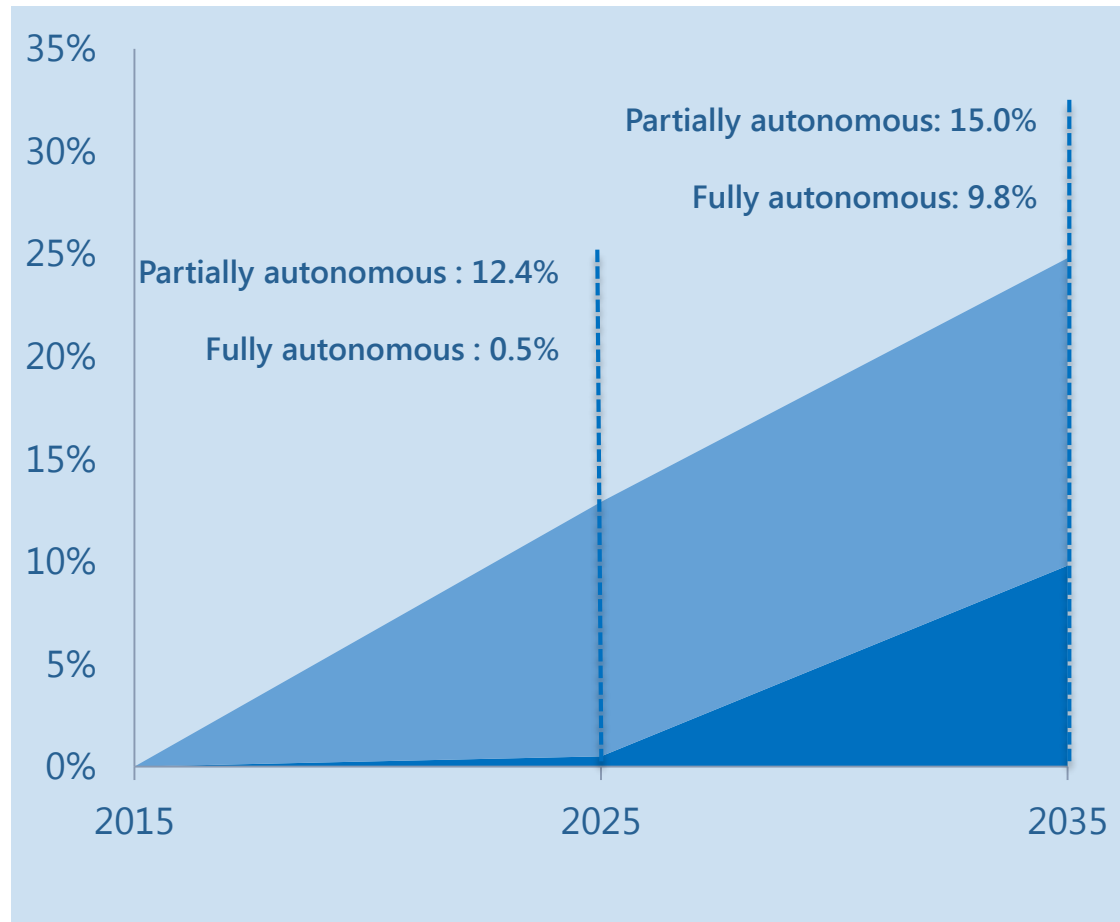


Quellen: GDV; KBA; Allianz Zentrum für Technik; KPMG, Deutschland 2015

By 2035 (partially) autonomous vehicles could represent one quarter of all new car purchases worldwide



Percentage of autonomous vehicles in new car purchases worldwide



Source: BCG (The Boston Consulting Group, April 2015)

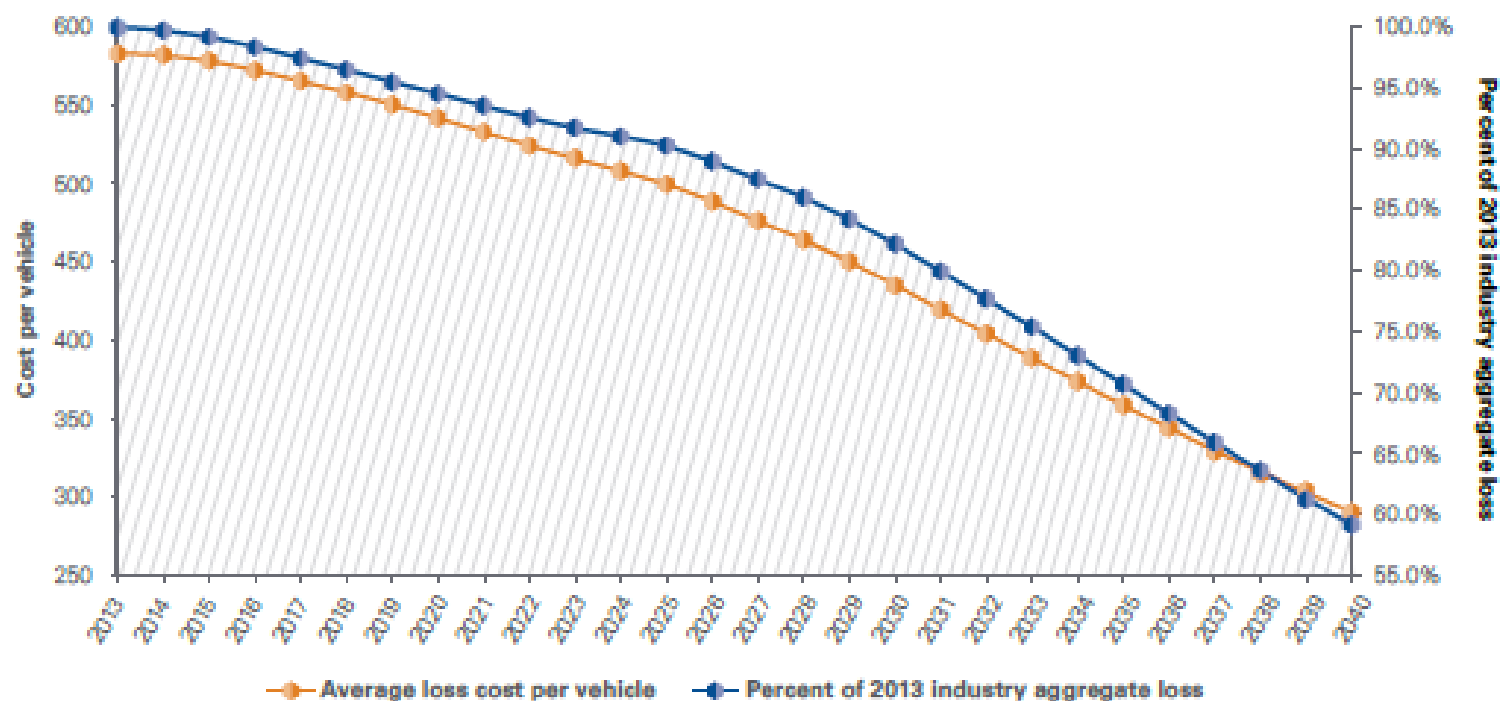
Marketplace of change: Automobile insurance in the era of autonomous vehicles

White Paper | October 2015

kpmg.com/insurance



Expected loss (baseline scenario)

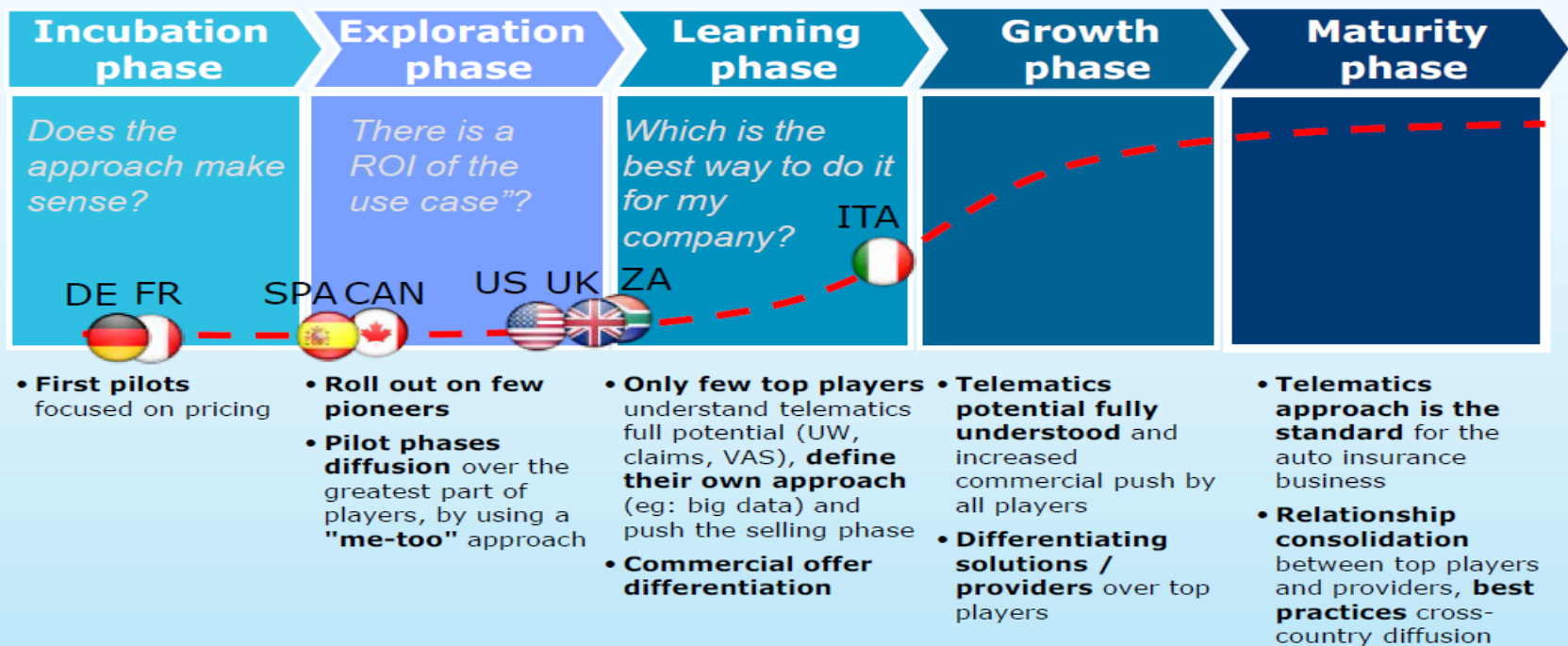


Source: KPMG LLP actuarial analysis

Note: Based on total auto insurance market



The insurance usage of the telematics technology is far to the maturity



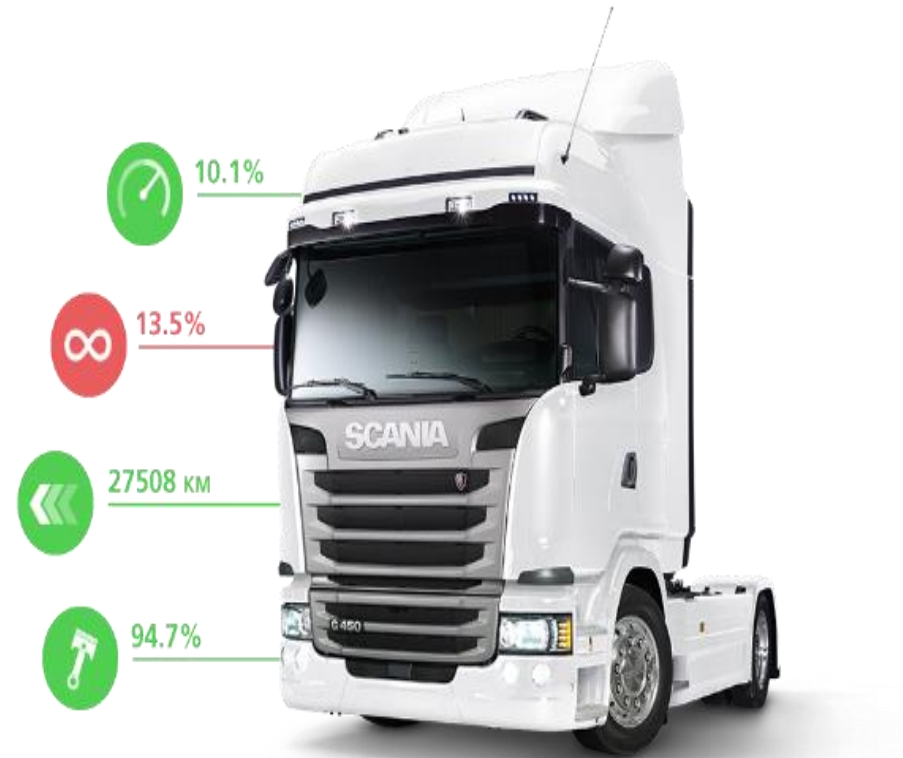
Source: Observatory on telematics, connected insurance & innovation

Matteo Carbone, 28 April 2016

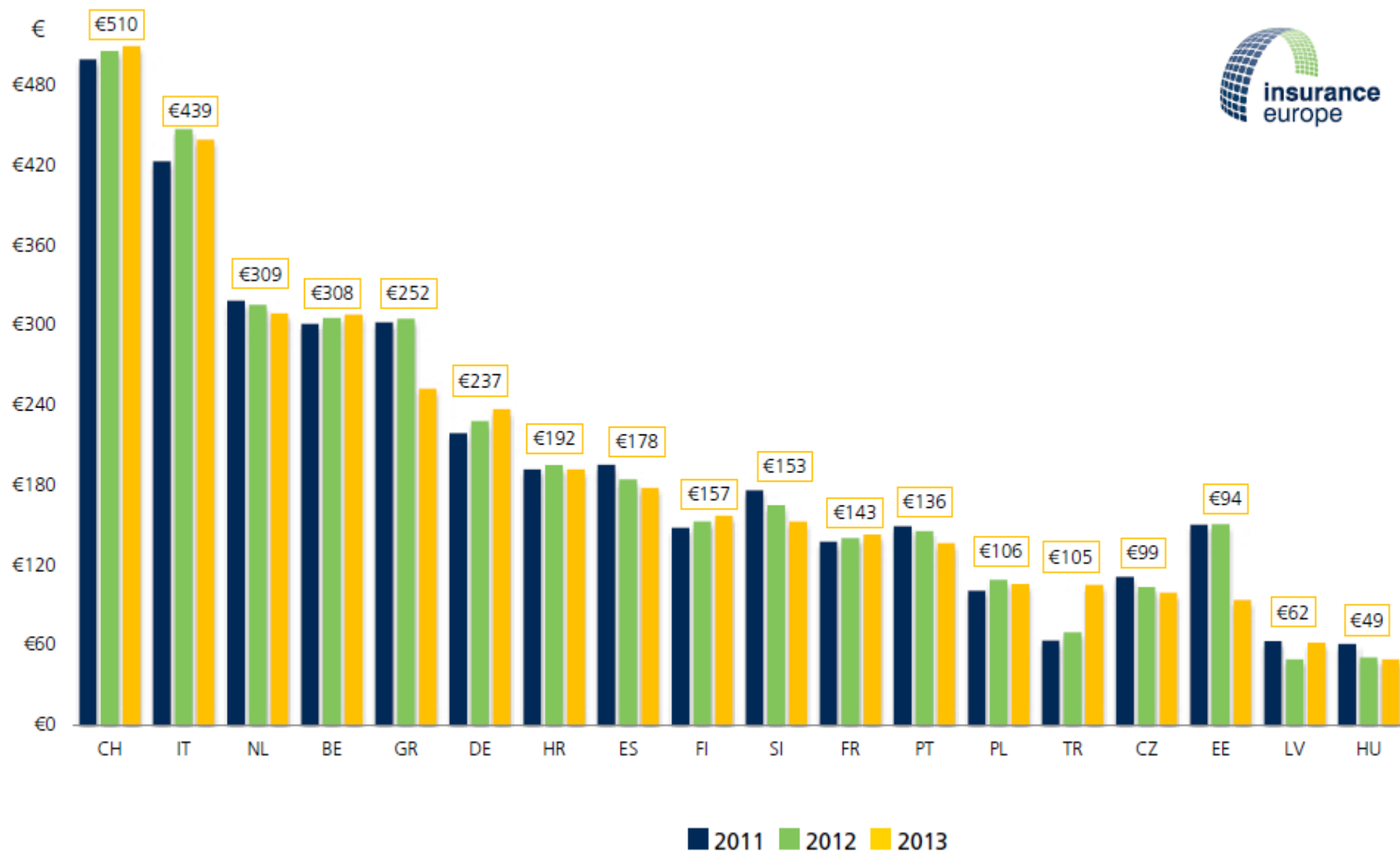
19/22

What are the Benefits?

- GPS tracking in real time
- Predictive diagnostics
- Driver Profiling & Driver Behavior Functionality
- Fuel Savings
- Reduced Maintenance
- Driver Compliance



Average MTPL premiums by country:2011–2013





1. There is a wide variety of parameters used today – in many cases doubtful if validity statistically proven;
2. Subjective (Behavioral) vs. Objective (Vehicle related) Parameters Significant changes of both;
3. Pressure on costs & efficiency drive does not allow for costly data analysis to fill pricing parameters;



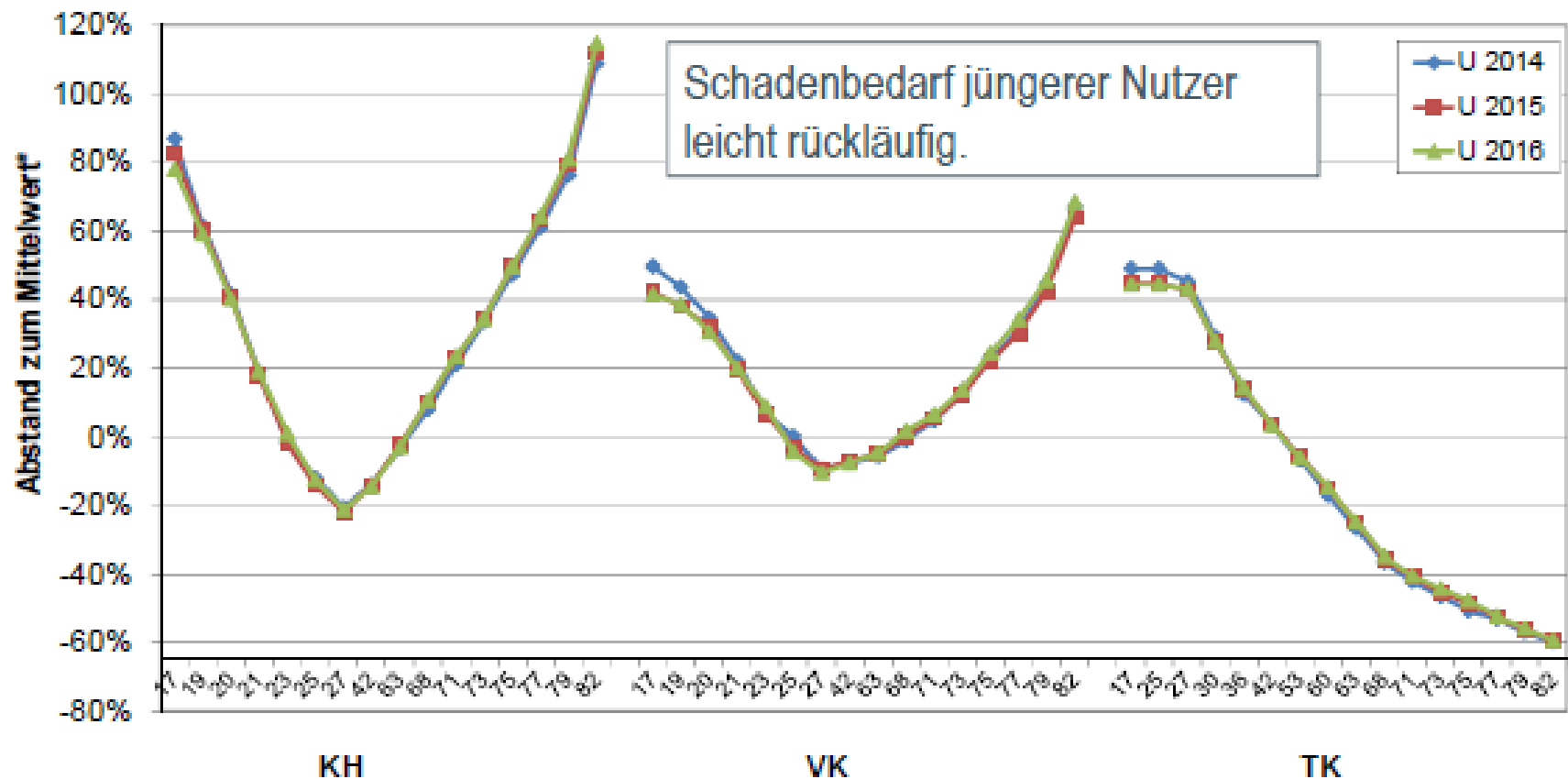
- E-call coming 2018
- Telematic tariffs already active in some CEE markets
- Key Questions:
 1. Economic validity? In most markets of CEE? Specifically in Romania? Only combined with MOD/Mobility Insurance?
 2. Correlation of losses and driving behaviour measured by telematic devices?

Will telematic devices tell me she is a good risk?



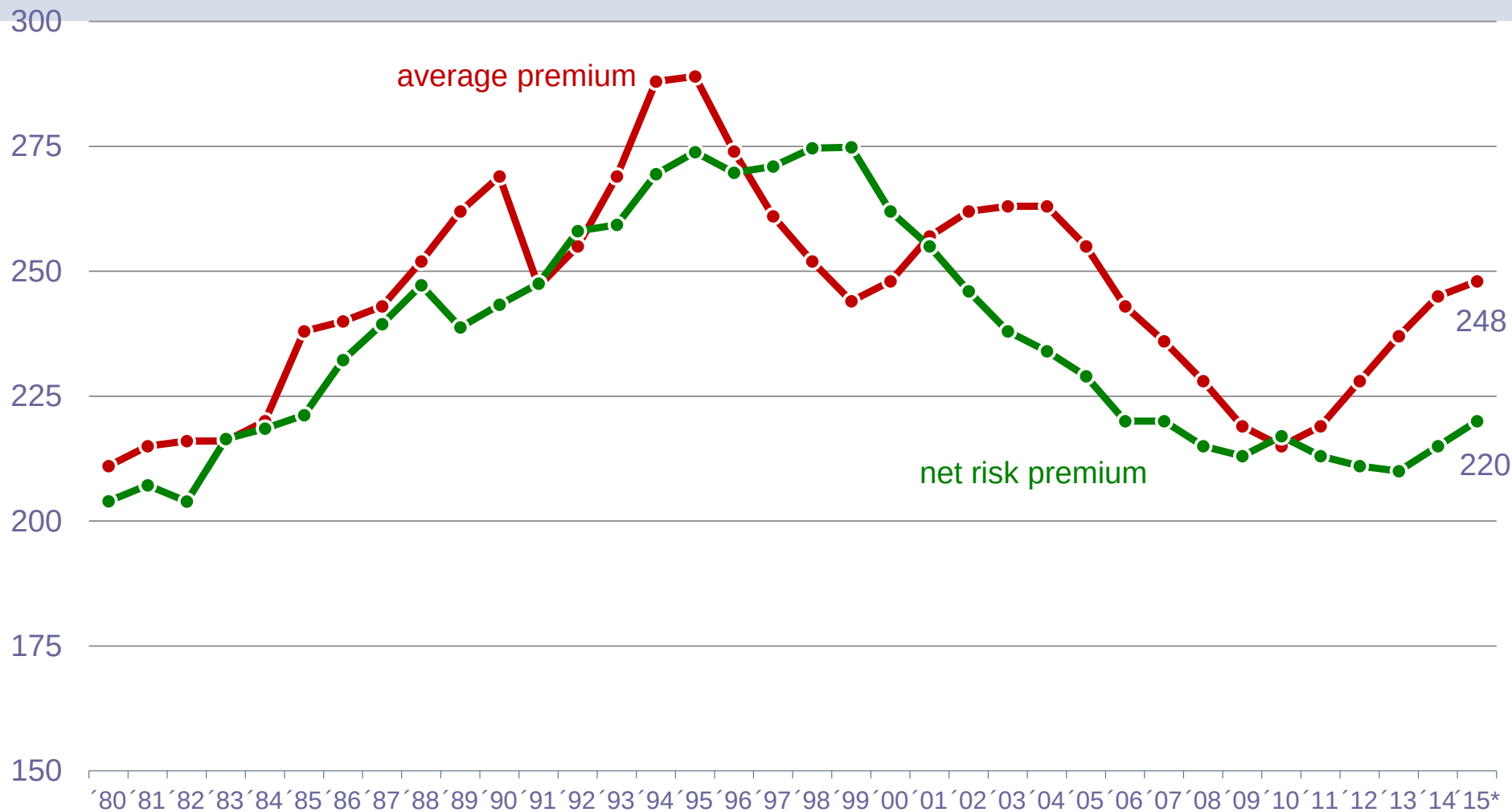


Kraftfahrtversicherung – Pkw: Differenziertes Nutzeralter Schadenbedarfsabstände



2.14 Development of annual average premium and net risk premium

MTPL, in EUR

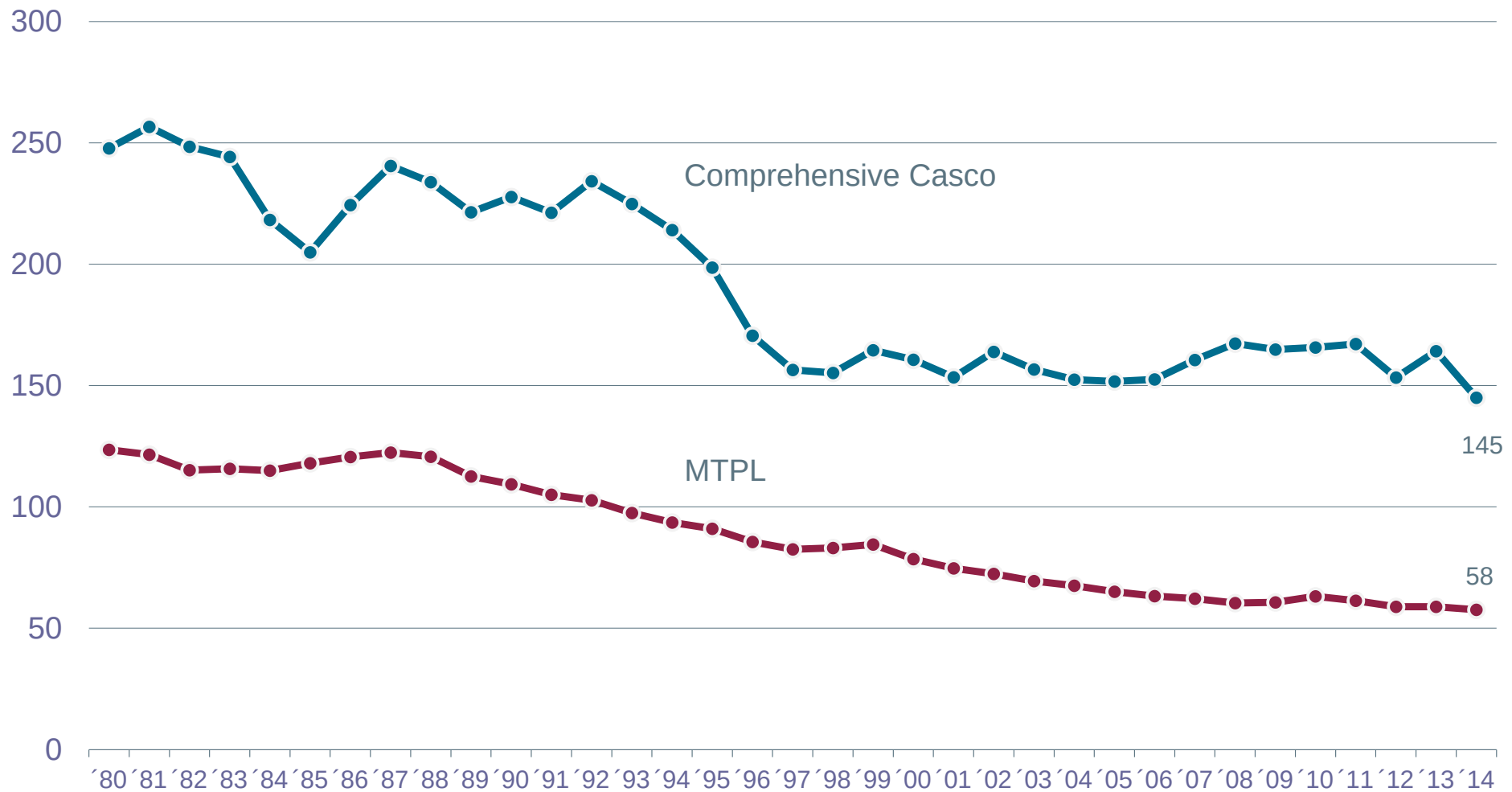


*preliminary result

11.04.2016

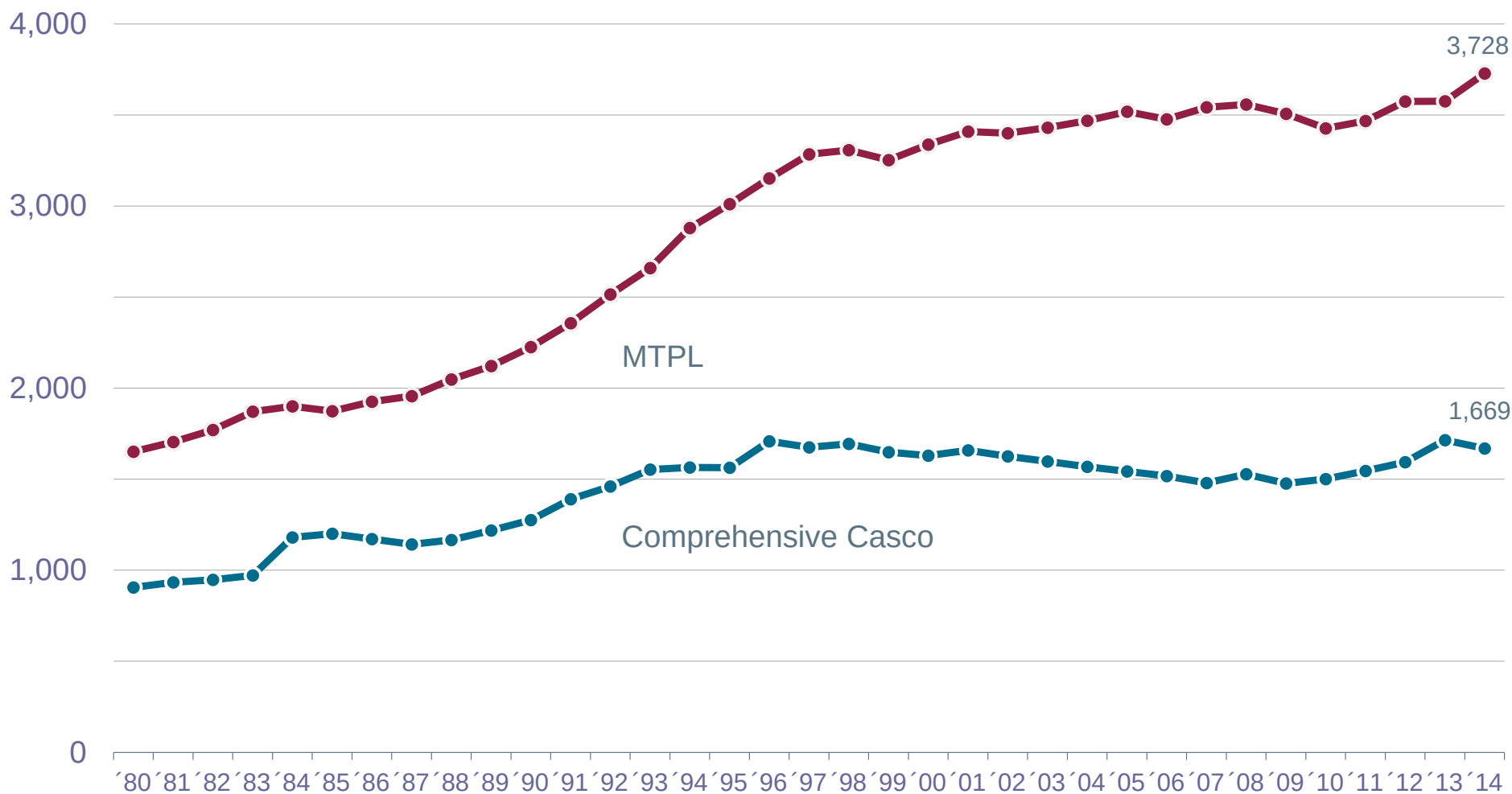
2.6 Development of claims frequency

MTPL and comprehensive casco, permille



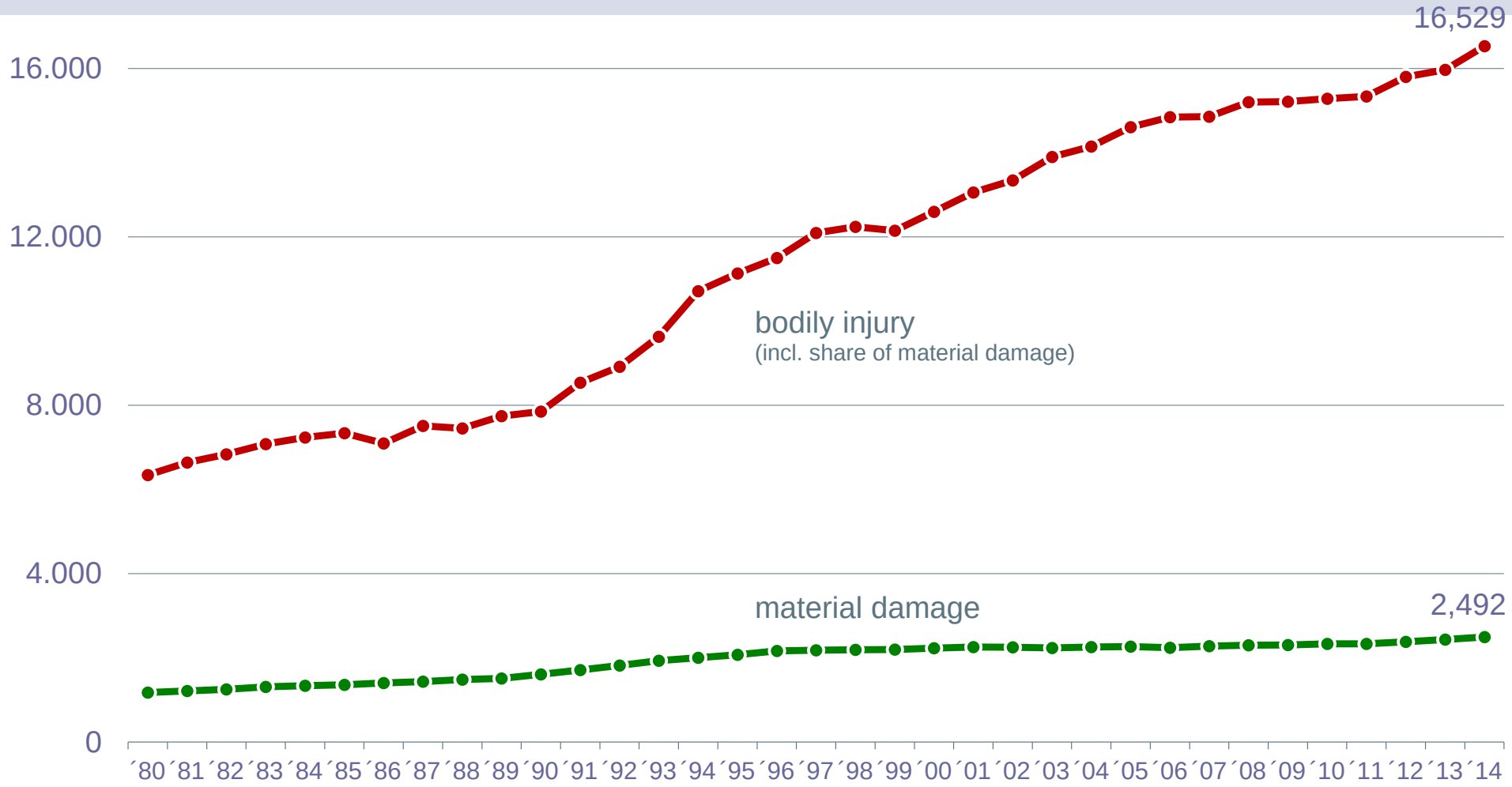
2.7 Development of average amount of claims

MTPL and comprehensive casco, in EUR



2.8 Development of average amount of claims

For bodily injury and material damage, MTPL, in EUR





1. There is a wide variety of parameters used today – in many cases doubtful if validity statistically proven;
2. Subjective (Behavioral) vs. Objective (Vehicle related) Parameters Significant changes of both;
3. Pressure on costs & efficiency drive does not allow for costly data analysis to fill pricing parameters;
4. Political and social acceptance for more extreme spread of prices? Using personal data? – An unanswered series of questions!



„Rich Calm“

- 54Y; best bonus malus
- under 7500 km pa
- no other drivers/kids
- new car with newest assist systems
- small town,
- garage in own house
- Great customer for Insurer

„I.O.U. Hitacurb“

- 24Y; one accident previous year; loss of licence at age of 18 (drugs)
- over 25.000km pa
- girlfriend as driver (21Y)
- old, large SUV with big engine
- big city – bad neighbourhood
- irregular payments of rent for apartment; parked on street
- No other insurance than MTPL



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€ 36 pa

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€3.600 pa

Gerechtigkeit alter und neuer Tarifierungsmerkmale in der Kfz-Versicherung

Bei welchen der folgenden Merkmale finden Sie eine Berücksichtigung für die Preisberechnung gerecht, und bei welchen Merkmalen finden Sie eine Berücksichtigung ungerecht?



Kategorien

- 1. „Historie“
- 2. „Fahrzeug“
- 3. „Verhalten“
- 4. „Lebens-situation“
- 5. „Schicksal“
- * üblich (Staus Quo)
- ** unzulässig (Diskriminierungsverbot)
- Fett = Telematik

Question





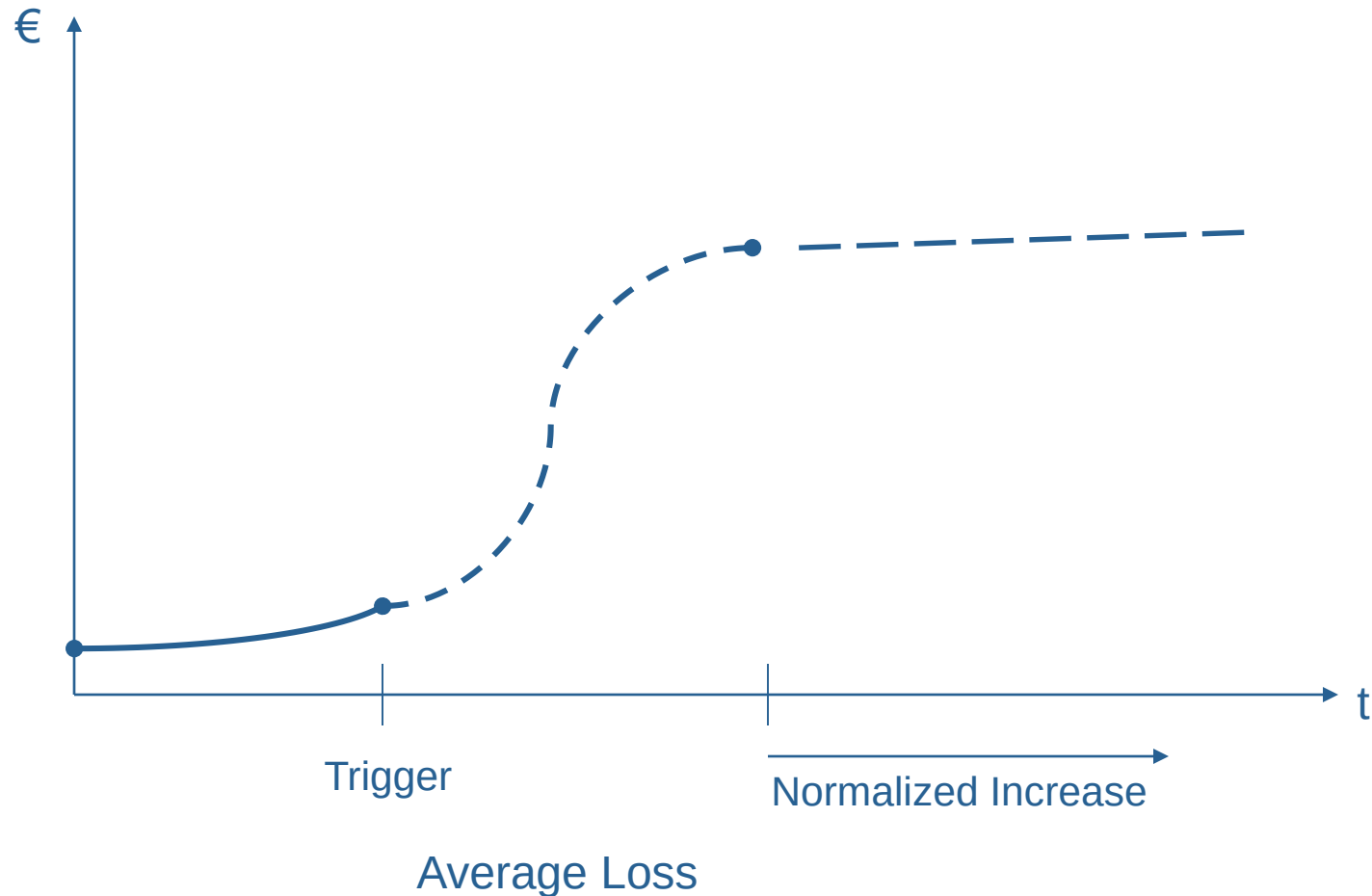
Insurers do not have to get „crushed“ between manufacturers/ importers/dealers and sales channels

InsurTechs/Aggregators & transparency
Car manufacturers just defend?!
Multi-channeling as key to success



The world is non-
linear

Early warning of triggers for increase in Average Losses





Fast is not always
good *Slow* isn't
either

... if you think it is a worm but it is cheese





APPENDIX

“Typical” view of a reinsurer



35,000 feet



Ground forces



Helicopter view





Thank you!



„We see a massive divide between the shop floor and the boardroom in terms of data. In the board room it is all about big data, on the shop floor they are making decisions with no data. There is something not right there“

(Suki Basi, Russell Group; cited from: Reactions; Baden-Baden Reporter 21 Oct. 2015)



Cost Ratios in MTPL (estimation for private cars)

- USA: 26%
- Germany: 19%
- Poland: 28%
- Estonia: 30%
- Hungary: 32%
- Latvia: 37%



Cost Ratios **and costs per vehicle** in MTPL (estimation for private cars)

• USA:	26%	\$ 165
• Germany:	19%	€ 46
• Poland:	28%	€ 38
• Estonia:	30%	€ 28
• Hungary:	32%	€ 22
• Latvia:	37%	€ 19



Cost Ratios **and costs per vehicle** in MTPL (estimation for private cars)

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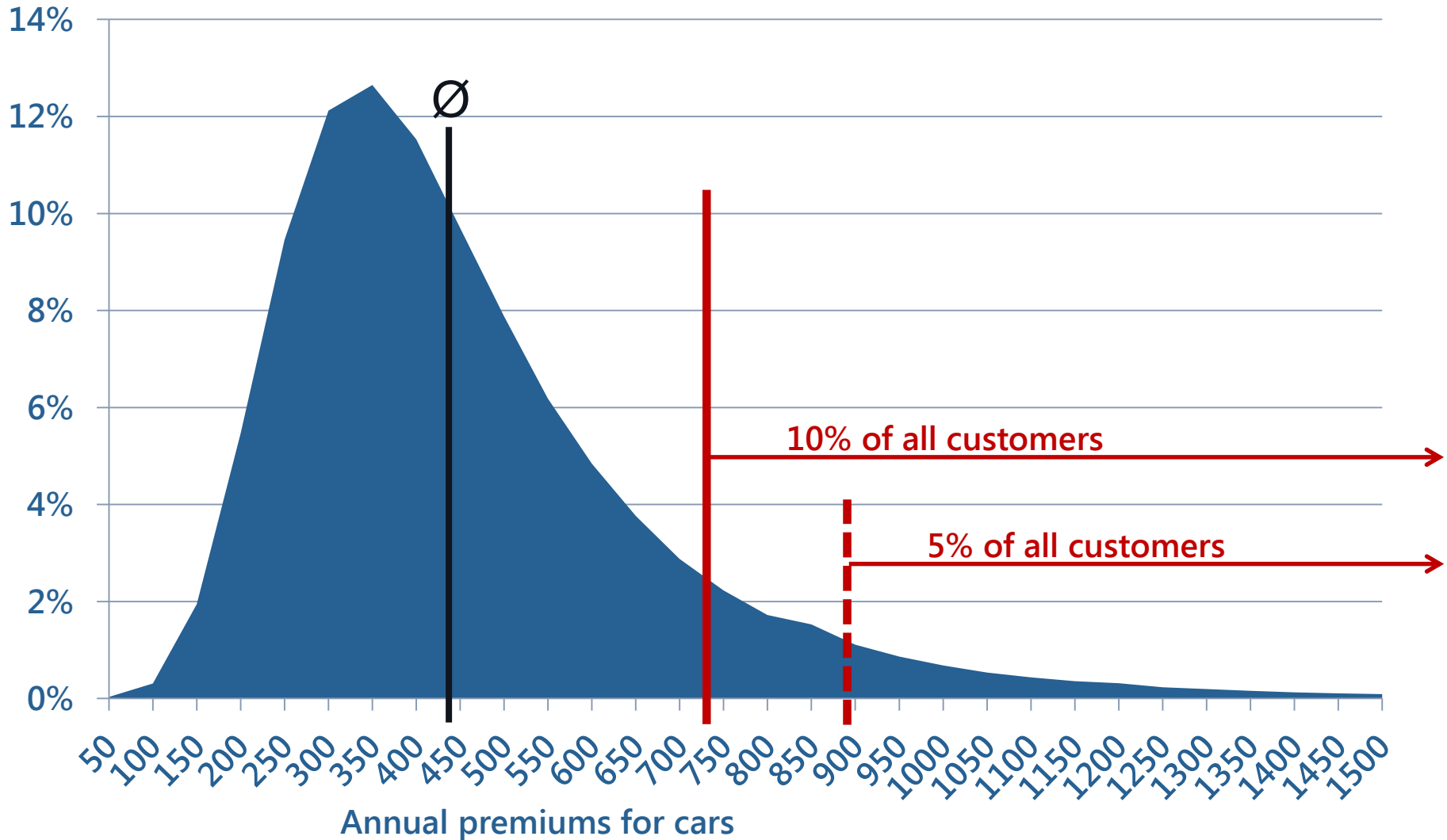
***How can costs of
€ 30 to € 100 be
factured in?***

***Added value of
data analysis?***

Telematics will become a niche product in Germany

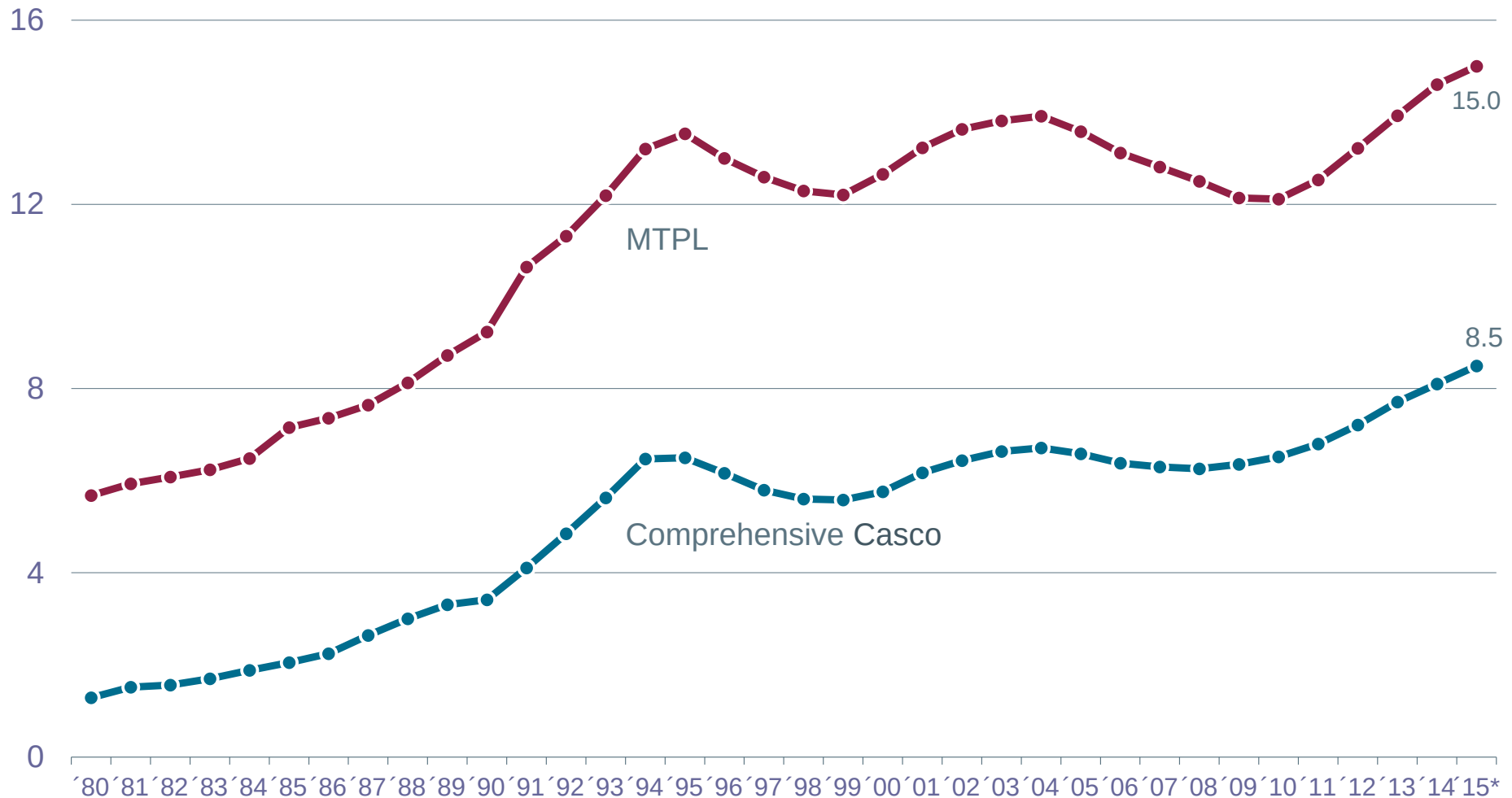


Distribution of motor premiums in Germany



2.5 Development of gross premium income

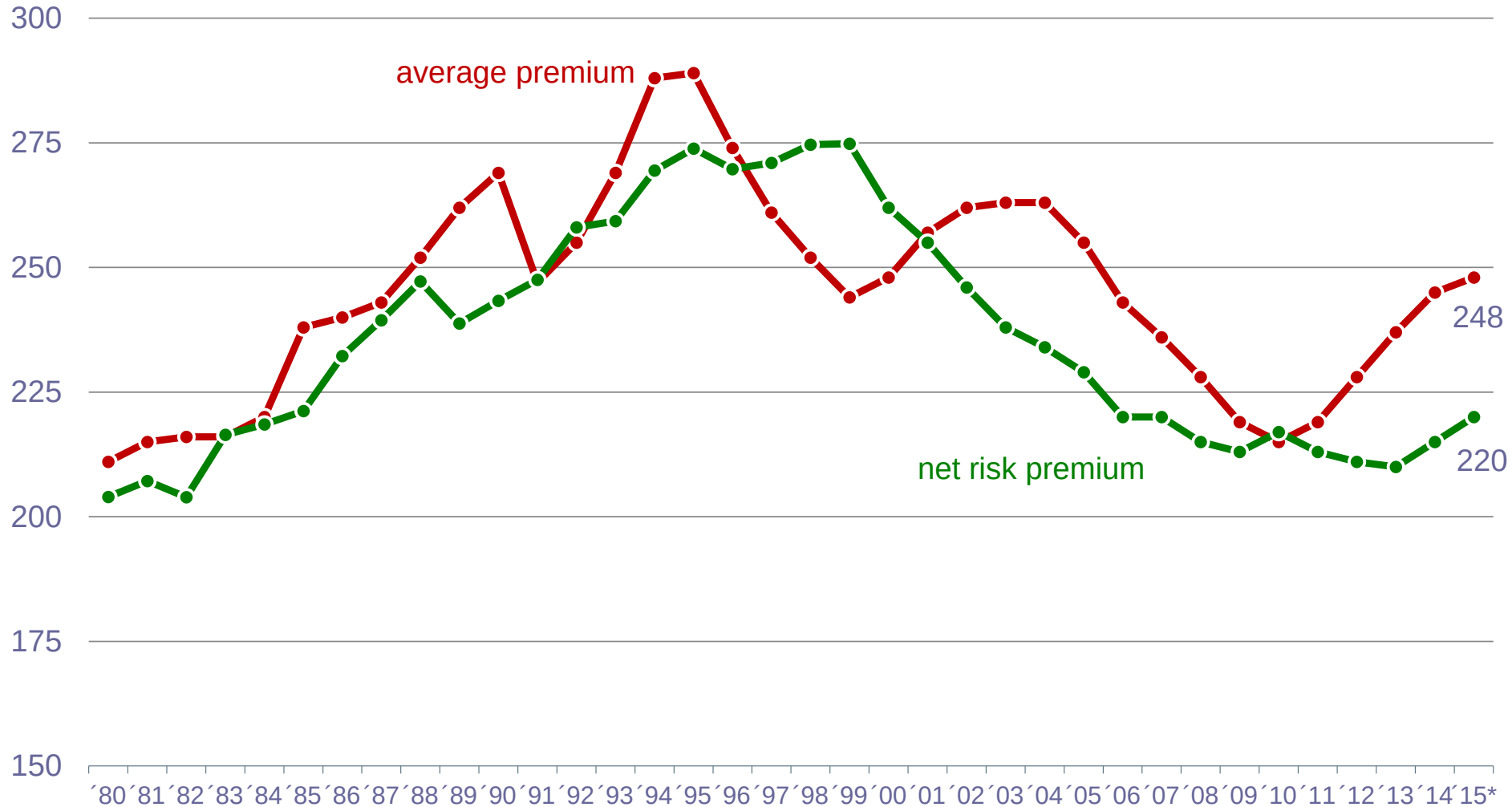
MTPL and comprehensive casco, in EUR billions



*preliminary result
11.04.2016

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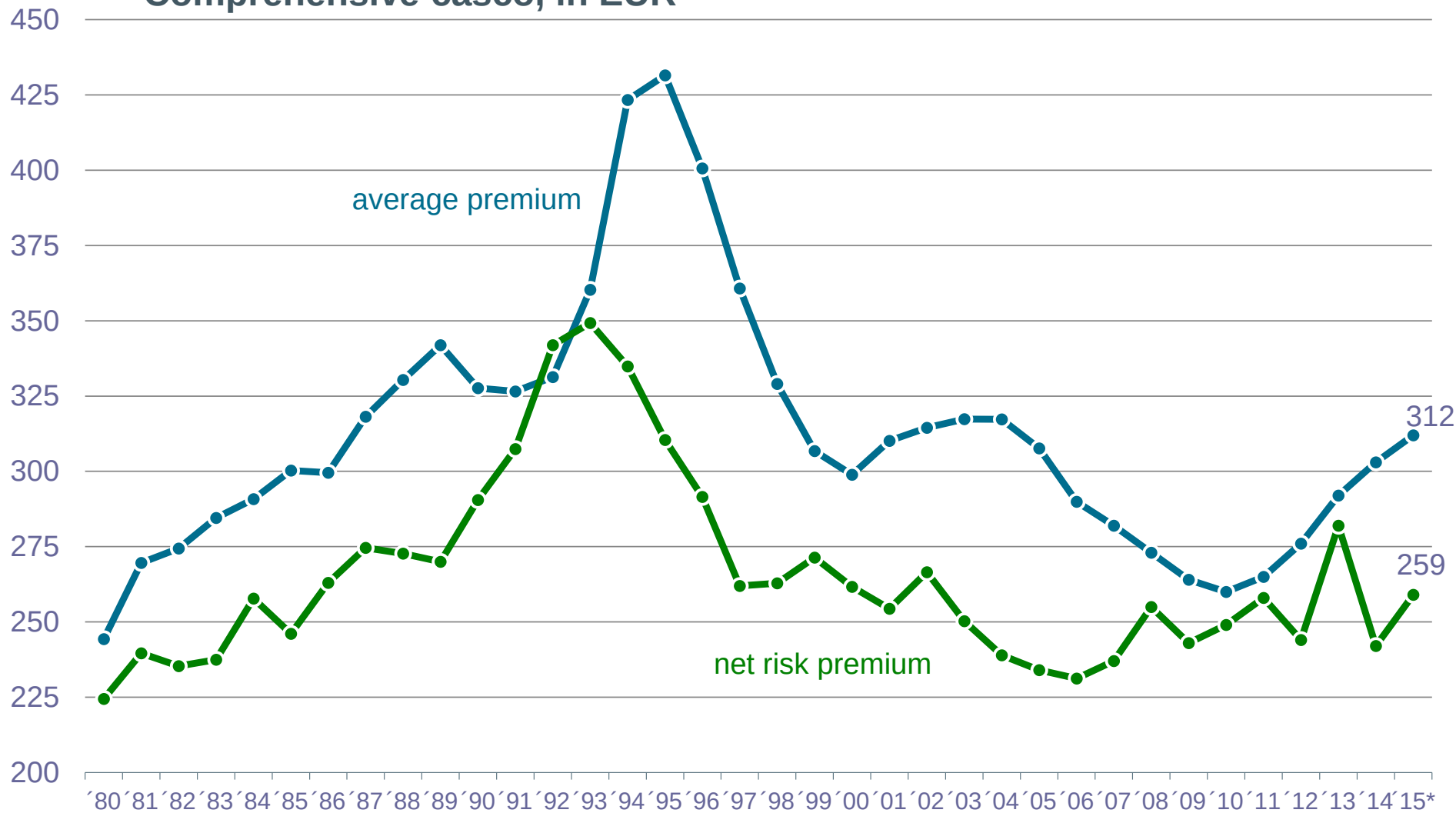
MTPL, in EUR



*preliminary result
11.04.2016

2.15 Development of annual average premium and net risk premium

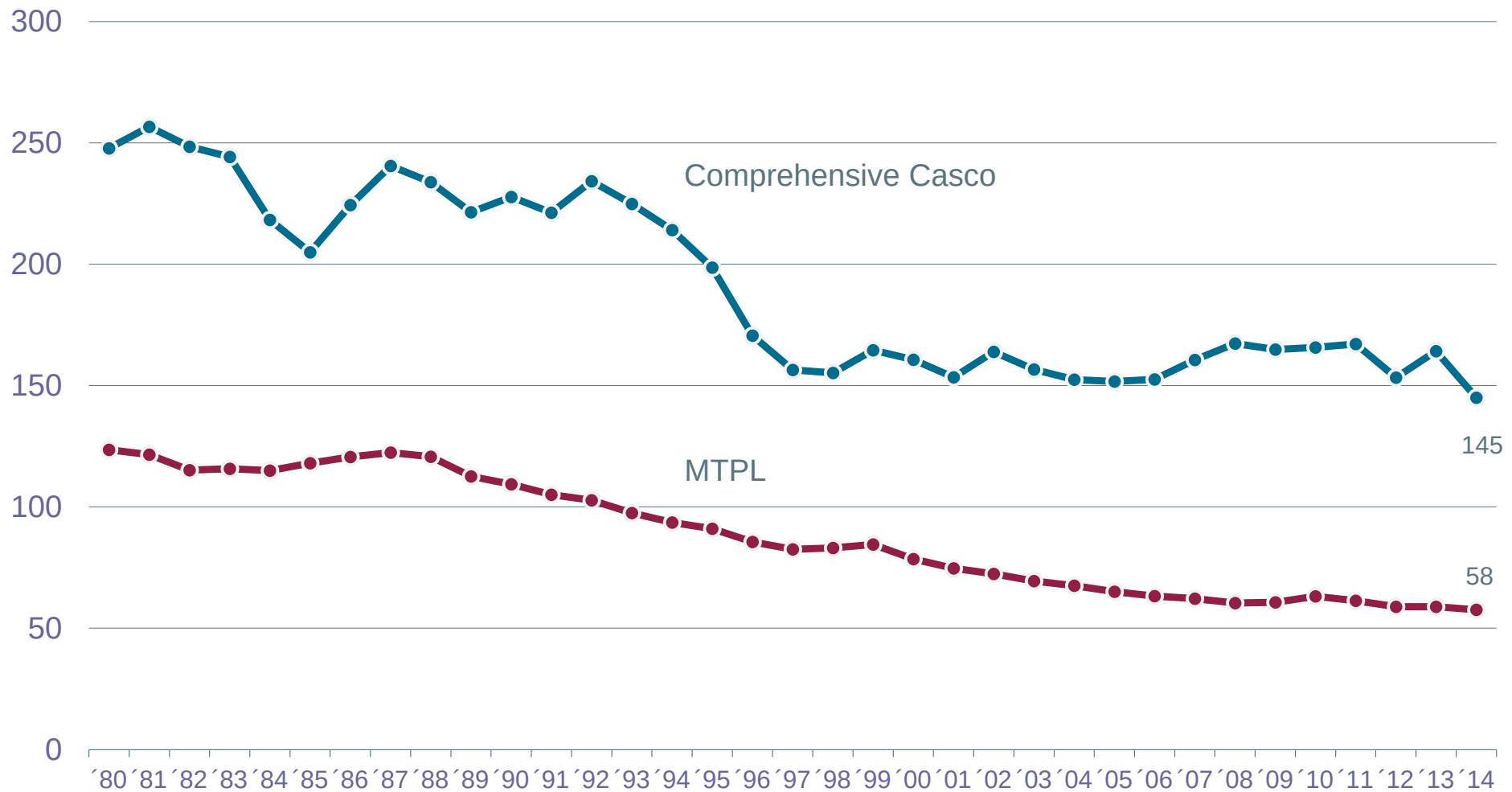
Comprehensive casco, in EUR



*preliminary result
11.04.2016

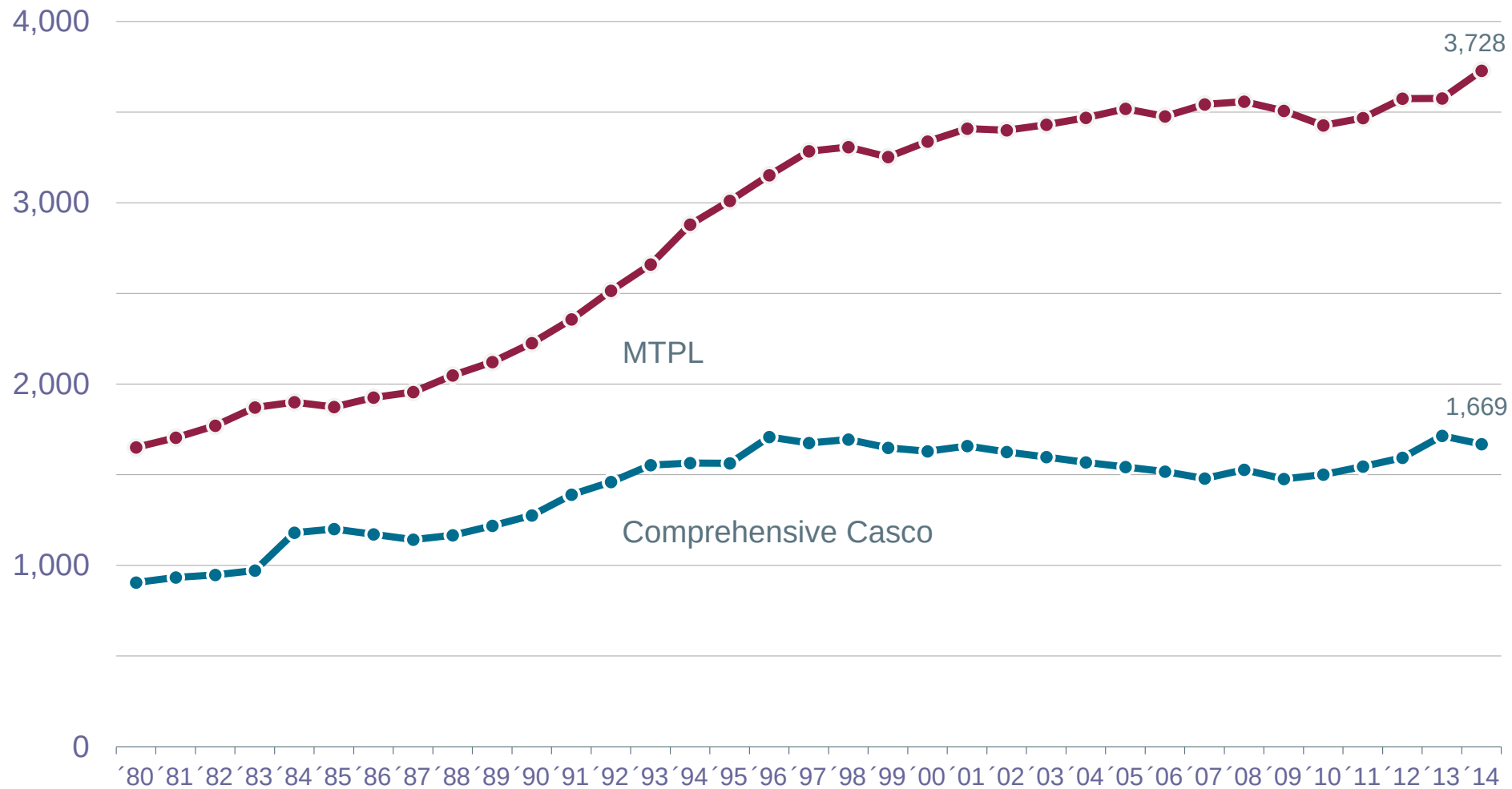
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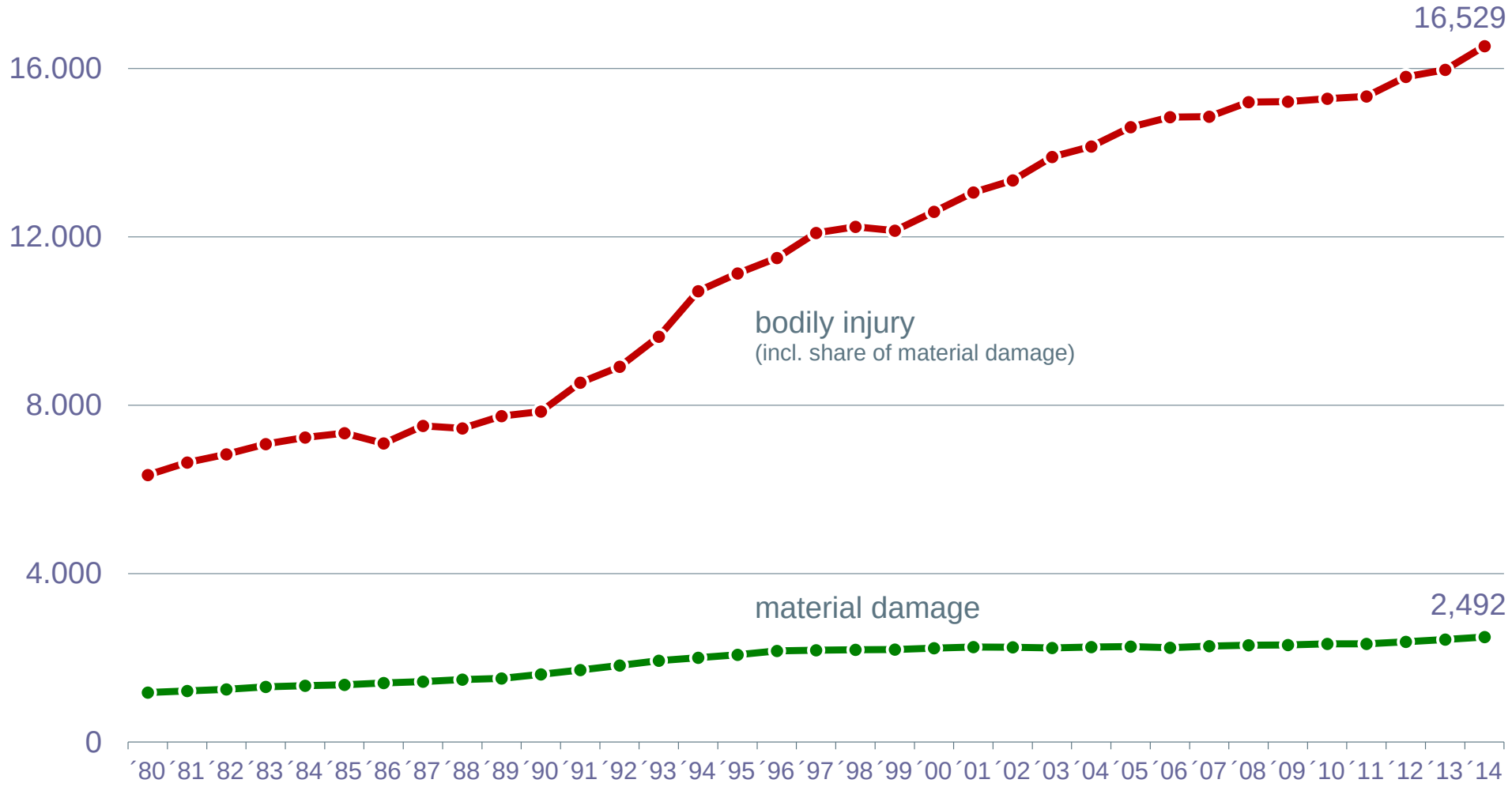
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For bodily injury and material damage, MTPL, in EUR





- Who owns the data
 - generated by telematic devices?
 - generated by „smart car“?
- Who has a keen interest in what data?
 - Manufacturers/Motor Industry, IT specialists, Leasing/Banks for insurance relevant data?
- BD&A and automated analysis
 - How to keep the computer from discriminating because of ethnical origin, gender etc.?
- Restrictions on Individualization of Price in case of extreme Premium Differentiation?



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